



>>Entry Name: 1-Hydroxy-2-phenyldiazene 2-oxide

Synonym(s): *N*-Hydroxy-*N*-nitrosobenzeneamine, 9Cl. *N*-Nitroso-*N*-phenylhydroxylamine, 8Cl. *N*-Hydroxy-*N*-nitrosoaniline

CAS Registry Number: 148-97-0

Related CAS Registry Numbers(s): 31773-90-7

$\text{PhN}^{(+)}(\text{O}^{(-)})=\text{NOH}(\text{Z-}) \ll \gg \text{PhN}(\text{OH})\text{NO}$

Molecular Formula: $\text{C}_6\text{H}_6\text{N}_2\text{O}_2$

Molecular Weight: 138.126

Accurate Mass: 138.042928

Percentage Composition: C 52.17%; H 4.38%; N 20.28%; O 23.17%

Physical Description: Cryst. (Me_2CO)

Other Data: V. unstable in air and org. solvs.

>>Derivative: NH_4 salt

Synonym(s): Cupferron

CAS Registry Number: 135-20-6

Molecular Formula: $\text{C}_6\text{H}_9\text{N}_3\text{O}_2$

Molecular Weight: 155.156

Accurate Mass: 155.069477

Percentage Composition: C 46.45%; H 5.85%; N 27.08%; O 20.62%

Use/Importance: Used in precipitation and extraction separation of Al, Bi, Co, Zn, Cu, Fe, Ga, In, Mn, Sb, Th, Ti, U, W, Zr; gravimetric detn. of Al, Bi, Cu, Fe(*III*), Nb, Ti, Zr; photometric detn. of Fe(*III*), Ti, V. Polymerisation inhibitor for process stabilisation, storage stabiliser for monomers (other salts also used)

Physical Description: Needles (H_2O)

Melting Point: Mp 163-164°

Solubility: Sol. H_2O , EtOH; insol. Et_2O

Other Data: Dec. on heating to NH_3 and NO_x

Hazard & Toxicity: Unstable in presence of Th(*IV*), with risk of explosion above 15°. Severe eye irritant. Exp. carcinogen (large dose)

Aldrich: 20688-1

Fluka: 61220

Rare Chemicals Library: S60138-1

Sigma: C5638

Other: Wako chemical

>>Derivative: 4-Methylbenzenesulfonyl

CAS Registry Number: 16046-28-9

Molecular Formula: $\text{C}_{13}\text{H}_{12}\text{N}_2\text{O}_4\text{S}$

Molecular Weight: 292.315

Percentage Composition: C 53.42%; H 4.14%; N 9.58%; O 21.89%; S 10.97%

Physical Description: Plates (EtOAc), cryst. ($\text{CHCl}_3/\text{hexane}$)

Melting Point: Mp 136-137 dec.°

>>Derivative: Me ether

Synonym(s): 1-Methoxy-2-phenyldiazene 2-oxide, 9Cl. 1-Methoxy-2-phenyldiimine 2-oxide, 8Cl

CAS Registry Number: 25370-94-9

Molecular Formula: $\text{C}_7\text{H}_8\text{N}_2\text{O}_2$

Molecular Weight: 152.152

Accurate Mass: 152.058578

Percentage Composition: C 55.26%; H 5.30%; N 18.41%; O 21.03%

Physical Description: Prisms (petrol)

Melting Point: Mp 37-38°